

REMARKS

Formal drawings are filed concurrently herewith that correct the informalities pointed out in the Notice of Draftsperson's Patent Drawing Review.

The Specification has been amended to correct typographical errors. No new matter is introduced.

Claims 67-106 are pending in the application. In the Office Action at hand, Claims 67-106 are rejected and Claims 67, 84-87 and 104-106 are objected to.

Claims 67, 84-87 and 104-106 have been amended to overcome the Examiner's objection to those claims. The amendments are discussed further below.

Claims 67, 69, 70, 72-76, 79-82, 84-87, 89, 90, 92-96, 99-102 and 104-106 are rejected under 35 U.S.C. § 102(b) as being anticipated by Yamada (U.S. Patent No. 5,508,834). In addition, Claims 68, 71, 88 and 91 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamada. Furthermore, Claims 77 and 97 are rejected under Section 103(a) as being unpatentable over Yamada in view of Nosker (U.S. Patent No. 4,660,936). Finally, Claims 78, 83, 98 and 103 are rejected under Section 103(a) as being unpatentable over Yamada and Nosker in view of Mori (U.S. Patent No. 6,288,700). In response to the Section 102(b) and 103(a) rejections, the Applicants respectfully submit that Claims 67-106, as amended, are neither anticipated nor obvious in view of Yamada, Nosker and Mori. Reconsideration is respectfully requested.

In embodiments of the display system in accordance with the present invention, the first polarizer *can be mounted in optical alignment with an aperture in the housing and mechanically spaced from the image plane with the housing by a distance such that visibility of first polarizer defects to a viewer is minimized.* For example, referring to FIGs. 2-4, in one embodiment, the first polarizer 302 can be mechanically spaced from the image plane of the display 306 with a first housing element 304. The first housing element 304 can mechanically secure or capture the first polarizer 302 within a receptacle 312. The receptacle 312 can be a recess within the first housing element 304, which surrounds an opening or aperture passing through the first housing element 304. This forms a recessed outer peripheral shoulder and rim (FIG. 4) for capturing the first polarizer 302 and mounting the polarizer over the aperture.

By employing the receptacle 312 in such a manner, the assembly process of the display system can be quick, simple and economical. In addition, when the first polarizer 302 is mounted within the receptacle 312 of such a design, the first polarizer 302 extends over the aperture and contacts the first housing element 304 only along the outer edges so that the optically usable area of the first polarizer 302 does not contact the first housing element 304. As a result, particles cannot become trapped between first polarizer 302 and the first housing element 304 in the optical area of the first polarizer 302 to form additional defects. When a second polarizer 310 is employed, in some embodiments, the polarizer 310 can also be spaced from the image plane on the opposite side in a receptacle 314 having an aperture in a second housing element 308. The second polarizer 310 can be held by the receptacle 314 without the use of adhesives.

Although adhesion is not required or necessary in the claimed invention, if desired, either of the receptacles 312 or 314 can employ adhesives along the periphery of the receptacles 312 and 314 to further secure the polarizers 302 and 310 without introducing additional defects to the optical areas of the polarizers 302 and 310. Furthermore, since the defects on the second side of the display 306 can have a lesser effect, in some embodiments, the second polarizer can be located on the second surface of the liquid crystal display.

In contrast, Yamada discloses in FIG. 7 a display having a liquid crystal cell 1 with transparent cover members 6 and 7 that are spaced from the liquid crystal cell 1. Polarizers 8 and 9 are mounted to the continuous exterior surfaces of transparent cover members 6 and 7 to be out of the depth of focus. The structure of the embodiment is similar to that shown in FIG. 5 where polarizers 8 and 9 are shown adhered to the exterior surfaces of cover members 6 and 7. As a result, particles can be trapped between the polarizers and the cover members which add additional defects to the system and can become a problem if the particles reach a certain size even when out of the depth of focus. In addition, adhesion process steps and equipment are required which add to the cost of manufacturing. Furthermore, the transparent material of the cover members 6 and 7 along the viewing axis can also introduce defects. As can be seen, the polarizers 8 and 9 are not mounted over apertures.

Accordingly, Claims 67, 69, 70, 72-76, 79-82, 84-87, 89, 90, 92-96, 99-102 and 104-106, as amended, are not anticipated in view of Yamada since Yamada does not teach or suggest *“the*

first polarizer being mounted to be optically aligned with the aperture and mechanically spaced by the housing from the image plane,” as recited in base Claim 67, as amended, or *“the first polarizer being mounted to be optically aligned with the aperture and mechanically secured and spaced by the housing from the image plane,”* as recited in base Claims 84-86, as amended, or *“mounting the first polarizer to be optically aligned with the aperture and, with the housing, mechanically spacing the first polarizer relative to the first side of the display,”* as recited in base Claim 87, as amended, or *“mounting the first polarizer to be optically aligned with the aperture and, with the housing, mechanically securing and spacing the first polarizer relative to the first side of the display,”* as recited in independent Claims 104-106, as amended. Therefore, Claims 67, 69, 70, 72-76, 79-82, 84-87, 89, 90, 92-96, 99-102 and 104-106, as amended, are in condition for allowance. Reconsideration is respectfully requested.

In view of the above arguments, Claims 68, 71, 88 and 91, which are dependent upon base Claims 67 and 87, as amended, are also not obvious in view of Yamada. Therefore, Claims 68, 71, 88 and 91 are in condition for allowance. Reconsideration is respectfully requested.

Nosker discusses in FIG. 3 an LCC 10 that is illuminated by a light source 12 having a Fresnel lens 24, with a polarizer 13 positioned therebetween. A sheet polarizer 26 is positioned on the opposite side of LCC 10 adjacent to two stacked diffuser screens 16x and 16y. A sheet polarizer 14 is positioned in front of diffuser screens 16x and 16y. The diffuser sheets 16x and 16y are located on the opposite side of the LCC 10 from the light source 12, and therefore, cannot be part of the backlight. In addition, no means are disclosed for mounting the polarizer sheets.

Accordingly, neither Yamada nor Nosker, alone or in combination, teaches or suggests *“the first polarizer being mounted to be optically aligned with the aperture and mechanically spaced by the housing from the image plane,”* as recited in base Claim 67, as amended, or *“mounting the first polarizer to be optically aligned with the aperture and, with the housing, mechanically spacing the first polarizer relative to the first side of the display,”* as recited in base Claim 87, as amended. In addition, Yamada and Nosker do not teach or suggest a backlight with *“a light source, a first diffuser and a second diffuser”*, as recited in Claims 77 and 97. Therefore, Claims 77 and 97 are not obvious in view of Yamada and Nosker and are in condition for allowance. Reconsideration is respectfully requested.

Mori discusses a light emitting flat panel device in FIG. 1 that can be used as a backlight. LEDs 4R, 4G and 4B are positioned laterally relative to a board 1 for directing light into lateral light guide routes 2. The light guide routes have light emitting holes 7. Although Mori mentions on column 2, line 5, that “any size from small to large can be realized”, Mori makes no mention of any relative dimensions so that the term “small” cannot be suggestive of a diagonal that is less than one inch.

Accordingly, Claims 78, 83, 98 and 103 are not obvious in view of Yamada, Nosker and Mori, since none of the references, either alone or in combination, teaches or suggests “*the first polarizer being mounted to be optically aligned with the aperture and mechanically spaced by the housing from the image plane,*” as recited in base Claim 67, as amended, or “*mounting the first polarizer to be optically aligned with the aperture and, with the housing, mechanically spacing the first polarizer relative to the first side of the display,*” as recited in base Claim 87, as amended, or “a diagonal that is less than one inch” as recited in Claims 83 and 103. Therefore, Claims 78, 83, 98 and 103 are in condition for allowance. Reconsideration is respectfully requested.

Finally, new Claims 107 - 114 are added to more particularly claim the present invention. Support for new Claims 107 - 114 is found at least in FIGs. 2-6 as well as on page 6, lines 2-26 of the Specification as originally filed. No new matter is introduced.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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